

to know each other in an informal, non-stressful setting would work together much more effectively during the stressful software system integration period. This reasoning proved to be correct: the traditional finger-pointing associated with system interface testing was virtually non-existent within the PDT.

It's also important to note that as project lead, author Lehtonen conducted frequent informal MBWA ("management by walking around") sessions. These sessions enabled him to meet firsthand all of the members of the various teams as well as to communicate the ideals for an open, inclusive project and to encourage the sharing of technical knowledge among team members. It also strengthened the goal of having an active and trusted management presence on the project.

### **An Electronic World**

We made a decision to reduce but not entirely eliminate the need for hardcopy documentation (addressing the often-heard comment that as soon as a document is published it is out of date). To that end, a couple of internal Web sites were established for the electronic distribution of key documents. We also relied heavily on e-mail. At the core of the design process, a CASE (computer-aided software engineering) tool was established to store our Object Management Technology (OMT) design information electronically and to generate hardcopy design documents for walkthroughs. This electronic repository was not only very effective in streamlining the documentation of the development process, but it also remained a key engineering component during the transition from the purely development project to the current sustaining engineering environment.

In effect, what we accomplished was to embed an effective information management environment within the project. By carefully selecting and tailoring the right tools and processes, we were able to enhance technical communication significantly and meet the information needs of the project. Because of this tailoring, we had at our fingertips the necessary information to facilitate decision-making processes, making for quick analysis of alternatives and timely selection, which kept the team moving forward at all times.

*In Part Two of this article (Defense AT&L May-June), the authors explore some of the challenges of building a cohesive, synergistic team, and conclude the article with a list of "implementation strategies" that were used successfully on this project and might be helpful for readers' projects.*

**Editor's note:** The authors welcome comments and questions. Barrett can be reached at [lbarrett@hst.nasa.gov](mailto:lbarrett@hst.nasa.gov). Lehtonen can be reached at [kenneth.e.lehtonen@nasa.gov](mailto:kenneth.e.lehtonen@nasa.gov).

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